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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/073,938

02/14/2002

Steven L. Seed

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01/12/2006

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EXAMINER

BILGRAMI, ASGHAR H

ART UNIT

PAPER NUMBER

2143

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/073,938

Applicant(s)

SEED ET AL.

Examiner

Asghar Bilgrami

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-65 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 05/08/02, 11/26/03

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jungck (U.S. Pub. No. 2005/0021863) and Sim (U.S. Pub. No. 2003/0031176).

3. As per claims 1, 16, 23, 38, 45 & 59 Jungck disclosed a system for managed object replication and delivery, comprising: a plurality of edge servers in a network; and a plurality of parent servers in the network (paragraph.19), wherein at least one of the plurality of edge servers and the plurality of parent servers (paragraph.25): direct a request by a client for an object to an edge server in the network (paragraphs. 27 & 35), if the edge server has the requested object, serve the requested object to the client (paragraph.56), otherwise, redirect the client request to a server that has the requested object and serve the requested object to the client(paragraph.57). However Jungck did not explicitly disclose if the requested object is popular, replicate the requested object to the edge server.

In the same field of endeavor Sim disclosed that if the requested object is popular, replicate the requested object to the edge server (paragraphs. 47 & 52).

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It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated to replicate an object at the edge server based on its popularity as disclosed by Sim in a method for managed object replication and delivery as disclosed by Jungck in order to make the delivery system more scalable resulting in lower traffic load on the network and providing most relevant & popular content to the requester more quickly making the system more robust and efficient.

4. As per claims 2, 24 & 46 Jungck-Sim disclosed the method of claim 1, wherein redirecting the client request to a server comprises redirecting the client request to a parent server in the network that has the requested object and serving the requested object to the client from the parent server (Jungck, paragraph.57).

5. As per claims 3, 25 & 47 Jungck-Sim disclosed the method of claim 1, wherein redirecting the client request to a server comprises redirecting the client request to a parent server in the network that does not have the requested object, recursively redirecting the request until a parent server in the network having the requested object is reached and serving the requested object to the client from the parent server (Jungck, paragraph.57).

6. As per claims 4, 26 & 48 Jungck-Sim disclosed the method of claim 1, wherein redirecting the client request to a server comprises redirecting the client request to an origin

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server if the requested object is not available at a parent server in the network and serving the requested object to the client from the origin server (Jungck, paragraph.57).

7. As per claims 5, 27 & 49 Jungck-Sim disclosed the method of claim 1, wherein directing a request by a client for an object to an edge server comprises directing a request by a client for an object to a best or optimal edge server (Jungck, paragraph.63).

8. As per claims 6, 28 & 50 Jungck-Sim disclosed the method of claim 5, wherein a best or optimal edge server comprises an edge server selected using at least one of a determination based on a best repeater selector, the likelihood of a copy of the requested object being available at the edge server, and the bandwidth between the edge server and the client (Jungck, paragraphs.63 & 71).

9. As per claims 7, 29 & 51 Jungck-Sim disclosed the method of claim 1, wherein replicating the requested object to the edge server comprises replicating the requested object to the edge server from a parent server (Sim, paragraphs, 47 & 52).

10. As per claims 8, 9, 30, 31, 52, 53 & 65 Jungck-Sim disclosed the system of claim 59, wherein at least one of the plurality of edge servers and the plurality of parent servers further replicate the requested object from an origin server if the requested object is popular and the requested object is unavailable on pares servers in the network (Sim, paragraphs, 47 & 52).

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11. As per claims 10, 21, 32, 43, 54 & 63 Jungck-Sim disclosed the method of claim 1, wherein whether the requested object is popular is determined using at least a request rate for the requested object (Jungck, paragraph.58).

12. As per claims 11, 12, 17, 18, 33, 34, 39, 40, 55 & 60 Jungck-Sim disclosed the system of claim 45, wherein at least one of the plurality of edge servers and the plurality of parent servers further delete an object if the object is no longer popular (Sim, paragraph, 230).

13. As per claims 13, 19, 35, 41, 56 & 61 Jungck-Sim disclosed the method of claim 1, wherein replicating the requested object comprises replicating the requested object in accordance with a dynamic replication threshold (Sim, paragraph, 230).

14. As per claims 14, 20, 36, 42, 57 & 62 Jungck-Sim disclosed the method of claim 1, wherein replicating the requested object comprises: replicating the requested object when a popularity of the requested object is great than a threshold popularity and there is enough storage to replicate the requested object; otherwise, if there is not enough storage to replicate the requested object, i) comparing the popularity of the requested object against a popularity of a least popular object in the storage, ii) if the popularity of the requested object exceeds the popularity of the least popular object in the storage, deleting the least popular object from the storage, iii) repeating i) and ii) until enough storage is available for the requested object or the

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popularity of the requested object is less than the popularity of the least popular object in the storage, and iv) replicating the requested object if there is enough storage (Sim, paragraph, 230).

15. As per claims 15, 22, 37, 44, 58 & 64 Jungck-Sim disclosed the method of claim 1, wherein serving the requested object is performed separately from replicating the requested object (Jungck, paragraphs.63 & 71).

Response to Arguments

16. Applicant's arguments with respect to claims 1-65 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asghar Bilgrami whose telephone number is 571-272-3907. The examiner can normally be reached on M-F, 8:00-5:00PM.

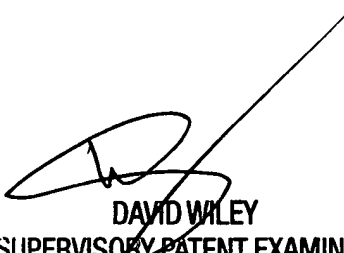
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


AB

Asghar Bilgrami
Examiner
Art Unit 2143


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SUPERVISORY PATENT EXAMINER
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